

Field Sampling Plan Addendum 9

Waste Disposal, Inc. Group Split Sampling

Omega Chemical OU-2

PREPARED FOR: Lynda Deschambault/EPA

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DATE: March 30, 2012

PROJECT NUMBER: 386743.FI.01

This Sampling and Analysis Plan (SAP) Addendum 9 has been prepared to support the U.S. Environmental Protection Agency (EPA) in conducting a feasibility study (FS) for the Omega Chemical Superfund Site Operable Unit 2 (OU2). This Addendum is a supplement to the existing Field Sampling Plan (FSP), *Field Sampling Plan for Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study, Addendum 1* (CH2M HILL, 2006a) and *Quality Assurance Project Plan (QAPP) for Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study, Addendum 1* (CH2M HILL, 2006b). Addendum 1 was prepared to supplement 2004 SAP (CH2M HILL, 2004a and 2004b).

Field activities covered by Addendum 9 include groundwater split sampling at the Waste Disposal, Inc. Group (WDI) site, located in Santa Fe Springs, California. Groundwater sampling is covered by the existing FSP and Addendum 1. Groundwater sampling procedures and laboratory requirements as described in Addendum 1 remain unchanged.

This Addendum was developed in accordance with *EPA Region IX, Guidance for Preparation of a U.S. EPA Region IX, Field Sampling Plan for EPA-Lead Superfund Projects* (EPA, 1993). Because this Addendum is a supplement to the existing FSP, not all sections are included as required in the EPA Region 9 Guidance.

1.0 Data Quality Objectives

1.1 Problem Statement

Background Information

The Omega Chemical Corporation Superfund Site (Site) is located in Los Angeles County, California (Comprehensive Environmental Response, Compensation, and Liability Information System [CERCLIS] ID No. CAD042245001). OU2 of the Site is the contamination in groundwater generally downgradient and originating from the former Omega Chemical Corporation facility in Whittier, California, much of which has commingled with chemicals released at other areas overlying the OU2 groundwater plume.

The WDI site is located just east of the OU2 plume (Attachment A); therefore, EPA is assessing the usability of groundwater data that is currently collected as part of WDI's groundwater monitoring program. EPA is also confirming the presence of Freon 113 and

1,4-dioxane in WDI monitoring wells with a historical presence of volatile organic compounds (VOCs). Freon 113 and 1,4-dioxane are currently not included in WDI's groundwater analytical program.

Site Conceptual Model

The site conceptual model for the Site is presented in the Remedial Investigation/Feasibility Study (RI/FS), entitled *Final Remedial Investigation/Feasibility Study Reports, Omega Chemical Corporation Superfund Site Operable Unit 2, Los Angeles County, California* (CH2M HILL, 2010).

Problem Statement/Objectives

The purpose of this investigation is to 1) compare EPA laboratory analytical results with WDI laboratory analytical results to assess the usability of WDI's data for the OU2 investigation and monitoring; and 2) obtain laboratory analytical results for Freon 113 and 1,4-dioxane. Investigative derived waste will not be generated by EPA during split sampling activities.

Planning Team Members

1. Artemis Antipas – Quality Assurance Manager
2. Tom Perina – Project Manager
3. Dan Jablonski – Task Manager

Resources and Relevant Deadlines

All of the appropriate staff and subcontractors will be utilized to meet the project objectives.

1.2 Decision Statements

Key Questions/Decisions

1. Do EPA split sample results support the usability of WDI results for the same split sample? Split sample result comparison will be one approach among other oversight activities to determine the usability of the data.
2. There is no Freon 113 or 1,4-dioxane data available for year 2012, so split sampling will be used to obtain Freon 113 and 1,4-dioxane data for the WDI area.
3. Investigative derived waste will not be generated by EPA; therefore, this activity will not be addressed in the following steps.

Possible Outcomes

1. There are no alternative outcomes. This data will be used in conjunction with other outcomes to assess the usability of the data.
2. There are no alternative outcomes. Freon 113 and 1,4-dioxane data will be used in conjunction with additional studies to assess the presence or absence of Freon 113 and 1,4-dioxane.

1.3 Inputs to the Decision

Required Information

1. Table 1 provides a summary of analysis and Table 2 provides the list of VOCs that will be analyzed for split groundwater samples.

2. Freon 113 and 1,4-dioxane data from split groundwater samples.

Source of Data

1. Split groundwater analytical data obtained from the EPA laboratory. Also split groundwater analytical data provided by WDI.
2. Freon 113 and 1,4-dioxane data for split groundwater analytical samples will be provided by the EPA laboratory.

Action Levels

1. The minimum detection limits provided in Table 2 are the action levels required for VOCs.
2. The California Department of Public Health Primary (CDPH) Maximum Contaminant Level (MCL) of 1,200 micrograms per liter ($\mu\text{g/L}$) is the action level for Freon 113. The CDPH Notification Level of 1 $\mu\text{g/L}$ is the action level for 1,4-dioxane.

Methods

1. WDI will use Method SW8260B to analyze VOCs. EPA will use analytical methods provided in the project QAPP.
2. The analytical methods for Freon 113 and 1,4-dioxane are provided in the project QAPP.

1.4 Study Boundaries

Population of Interest

1. Groundwater.
2. Groundwater.

Physical Boundaries

1. Figures 1-2, 5-6 and 5-7 in Attachment B show a site plan of the monitoring well locations. On Figure 1-2, the WDI wells are labeled with the "WDI" prefix; whereas, the WDI wells on Figures 5-6 and 5-7 do not. The boundary for where the data will be collected and where the decisions will be made is one of the same.
2. Same as above for Decision Statement 2.

Temporal Boundaries

1. The temporal boundary is until the next groundwater monitoring event occurs.
2. Same as above for Decision Statement 2.

Data Gathering Limitations

Data gathering limitations for Decision Statements 1 and 2 include site access, inclement weather, and availability of groundwater in wells for sampling.

1.5 Decision Rules

Parameter that Characterizes Population of Interest

1. Individual data points will be used. If needed, a statistical analysis may be used.
2. Individual data points will be used.

Action Levels for the Study

All action levels have been presented in Section 1.3.

Decision Rules

1. VOCs analytical data for both WDI and EPA split sampling groundwater samples will be tabulated and presented in a report.
2. Freon 113 and 1,4-dioxane analytical data will be compared to regulatory limits and the findings will be presented in a report.

1.6 Tolerable Limits on Decision Rules

The split sampling is based on professional judgment; therefore, this section does not apply.

1.7 Tolerable Limits on Decision Rules

1. See Figure 1-2 in Attachment A for location of wells that will be monitored for split sampling. These include wells WDI-GW-1, WDI-GW-10, WDI-GW-11, WDI-GW-22, WDI-GW-23, WDI-GW-26, WDI-GW-27, WDI-GW-29, WDI-GW-30, and WDI-GW-32.
2. Same as above for decision Statement 2.

1.8 Data Acquisition Requirements (Nondirect Measurements)

Previously collected data and other information will be used to assist decision making.

2.0 Measurement Data Acquisition

2.1 Sampling Process Design

Background

Background information and objectives are presented in Section 1.

Schedule of Analyses

The field investigation is expected to be two to three days.

Rationale for Sampling Design

Refer to objectives and sampling locations in previous sections of this sampling addendum.

Samples will be analyzed at the EPA CLP laboratories, EPA Regional Laboratory and/or Contract Laboratories.

The analytical parameters for the individual samples are detailed in Table 1.

2.2 Sampling Method Requirements

Refer to FSP (CH2M HILL, 2004a) for groundwater sampling methods

2.3 Sample Handling and Custody Requirements

Refer to QAPP (CH2M HILL, 2006b).

2.3 Analytical Methods Requirements

Project analytes, methods, and required detection levels have been listed in Tables 1 and 2. The analyses for volatiles and semi-volatiles will be per EPA CLP methodology and laboratories or the EPA Regional Laboratory depending on availability. As required, if detection limits and the analyte lists differ from the standard CLP lists, the analyses will be carried out per special services provisions currently available under the CLP. Similarly, a low-level organic statement of work (OLC 3.2) or larger sample volumes may be used to attain lower-level organic detection limits. If the CLP is unavailable, the analyses can be carried out at the EPA Regional Laboratory using the laboratory's standard operating procedures and QA equivalent to the CLP per standard operating procedures in the QAPP (CH2M HILL, 2006b).

2.4 Quality Control Requirements

Field QC Procedures

QC requirements related to the sample collection process (i.e., design, methods, handling, and custody) requirements have been discussed in the QAPP (CH2M HILL, 2006b).

Field QC samples include field duplicates, and field blanks. Laboratory QC samples (for matrix spike/matrix spike duplicates [MS/MSDs]) will not be collected as part of a split sampling event. QC samples will be collected immediately following collection of target samples, using the same procedures as those used for collection of the target sample.

Laboratory Procedures

Laboratory QC procedures will include the following:

- Analytical methodology according to specific methods listed in Table 1.
- Instrument calibrations and standards as defined in specific methods listed in the CLP statement of work.
- Laboratory blank measurements per CLP statement of work.
- Accuracy and precision measurements per CLP statement of work, at a minimum of 1 in 20, 1 per batch.
- Data reduction and reporting according to specific methods listed in Tables 1 and 2.
- Laboratory documentation equivalent to the CLP statement of work.

2.5 Instrument/Equipment Testing, Inspection, and Maintenance Requirements

Refer to QAPP (CH2M HILL, 2006b).

2.6 Instrument Calibration and Frequency

Refer to QAPP (CH2M HILL, 2006b).

2.8 Data Management

Refer to QAPP (CH2M HILL, 2006b).

3.0 Assessment/Oversight

Refer to QAPP (CH2M HILL, 2006b).

4.0 Data Validation and Usability

Refer to QAPP (CH2M HILL, 2006b).

References

CH2M HILL. 2004a. *Field Sampling Plan for Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study*. Prepared for the U.S. Environmental Protection Agency. July.

CH2M HILL. 2004b. *Quality Assurance Project Plan Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study*. Prepared for the U.S. Environmental Protection Agency. July.

CH2M HILL. 2006a. *Field Sampling Plan for Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study Addendum 1*. Prepared for the U.S. Environmental Protection Agency. November.

CH2M HILL. 2006b. *Quality Assurance Project Plan Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study Addendum 1*. Prepared for the U.S. Environmental Protection Agency. November.

Project Navigator, Ltd. TRC Terradex, Inc. (TRC). 2009. *Semi-Annual Operations, Maintenance, and Monitoring Status and Evaluation Report*. Prepared for Waste Disposal, Inc. Group (WDIG). December.

U.S. Environmental Protection Agency. 1993. *EPA Region IX Guidance for Preparation of a U.S. EPA Region IX Field Sampling Plan for EPA-Lead Superfund Projects*.

Table 1
Sample Analysis Table

Analysis	Matrix (Sample Type)	No. of samples	TAT	Review/ Validation
VOCs plus MTBE (CLP SOW SOM01.2) with TIC reporting needed	Groundwater	14	21 days	Tier 1A/1B 90% Tier 3 10%
1,4-Dioxane (CLP SOW SOM01.2)	Groundwater	14	21 days	Tier 1A/1B 90% Tier 3 10%

Notes:

Above sample numbers include field duplicates, and trip blanks.

Expanded Analyte List:

1) The analyses for the organics listed below will be per EPA Contract Laboratory Program (CLP) methodology. Per project needs, detection limits and the analyte list differ from the standard CLP lists, the analyses can be carried out per special services provisions currently available under the CLP. If needed low/trace level statements of work (to include use of ICP/MS or SIM) or larger sample volumes may be used to attain lower level detection limits. If CLP is unavailable, the analyses can be carried out at the EPA Regional laboratory using the laboratory's standard operating procedures and quality assurance equivalent to CLP. Required detection limits are listed below.

2) For groundwater, some analytes may be analyzed by the EPA CLP Statement of Work or the equivalent EPA Regional Laboratory Standard Operating Procedures shown in Appendix B of the July 2004 QAPP, depending on availability. EPA Regional Laboratory specifications or data quality indicator specifications have been provided in Appendix B of the July 2004 QAPP.

3) For VOCs, report also tentatively identified compounds (TICs).

Table 2
Analytical Parameters and Reporting Limits for Groundwater

Note: Analytes not on CLP-SOW TAL are indicated as "Additional-Modification"; SIM option required where applicable except for 1,4-dioxane which is requested to be analyzed by EPA Method 8270C; for analytes outside CLP program, the requested analytical method is provided.

Compound	CLP SOW Target Compound SOM01.2	Reporting Limit (ug/L)
Organic Compounds		
Acetone	Yes	5
Benzene	Yes	0.5
Bromochloromethane	Yes	0.5
Bromodichloromethane	Yes	0.5
Bromoform	Yes	0.5
Bromomethane	Yes	0.5

Table 2

Analytical Parameters and Reporting Limits for Groundwater

Note: Analytes not on CLP-SOW TAL are indicated as "Additional-Modification"; SIM option required where applicable except for 1,4-dioxane which is requested to be analyzed by EPA Method 8270C; for analytes outside CLP program, the requested analytical method is provided.

Compound	CLP SOW Target Compound SOM01.2	Reporting Limit (ug/L)
Carbon disulfide	Yes	0.5
Carbon tetrachloride	Yes	0.5
Chlorobenzene	Yes	0.5
Chloroethane	Yes	0.5
Chloroform	Yes	0.5
Chloromethane	Yes	0.5
Cyclohexane	Yes	0.5
Dibromochloromethane	Yes	0.5
1,2-Dibromo-3-chloropropane (DBCP)	Yes-SIM option	0.05
1,2-Dibromoethane	Yes-SIM option	0.05
1,2-Dichlorobenzene	Yes	0.5
1,3-Dichlorobenzene	Yes	0.5
1,4-Dichlorobenzene	Yes	0.5
Dichlorodifluoromethane	Yes	0.5
1,1-Dichloroethane	Yes	0.5
1,2-Dichloroethane	Yes	0.5
1,1-Dichloroethylene	Yes	0.5
cis-1,2-Dichloroethylene	Yes	0.5
trans-1,2-Dichloroethylene	Yes	0.5
Dichloromethane (Methylene Chloride)	Yes	0.5
1,2-Dichloropropane	Yes	0.5
cis-1,3-Dichloropropene	Yes	0.5
trans-1,3-Dichloropropene	Yes	0.5
Ethylbenzene	Yes	0.5
2-Hexanone	Yes	5
Isopropylbenzene (Cumene)	Yes	0.5
Methyl acetate	Yes	0.5
Methyl ethyl ketone	Yes	5
Methyl isobutyl ketone (MIBK)	Yes	5
Methylcyclohexane	Yes	0.5
Styrene	Yes	0.5
1,1,2,2-Tetrachloroethane	Yes	0.5
Tetrachloroethylene (PCE)	Yes	0.5
Toluene	Yes	0.5
1,2,3-Trichlorobenzene	Yes	0.5
1,2,4-Trichlorobenzene	Yes	0.5
1,1,1-Trichloroethane (1,1,1-TCA)	Yes	0.5
1,1,2-Trichloroethane	Yes	0.5

Table 2

Analytical Parameters and Reporting Limits for Groundwater

Note: Analytes not on CLP-SOW TAL are indicated as "Additional-Modification"; SIM option required where applicable except for 1,4-dioxane which is requested to be analyzed by EPA Method 8270C; for analytes outside CLP program, the requested analytical method is provided.

Compound	CLP SOW Target Compound SOM01.2	Reporting Limit (ug/L)
Trichloroethylene (TCE)	Yes	0.5
Trichlorofluoromethane	Yes	0.5
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	Yes	0.5
Vinyl chloride	Yes	0.5
Xylene(s)	Yes	0.5
Methyl tert-butyl ether (MTBE)	Yes	0.5

<i>Emergent Compounds for Groundwater</i>	<i>Method</i>	<i>Reporting Limit (ug/L)</i>
1,4-Dioxane	CLP SOW SOM01.2	0.5

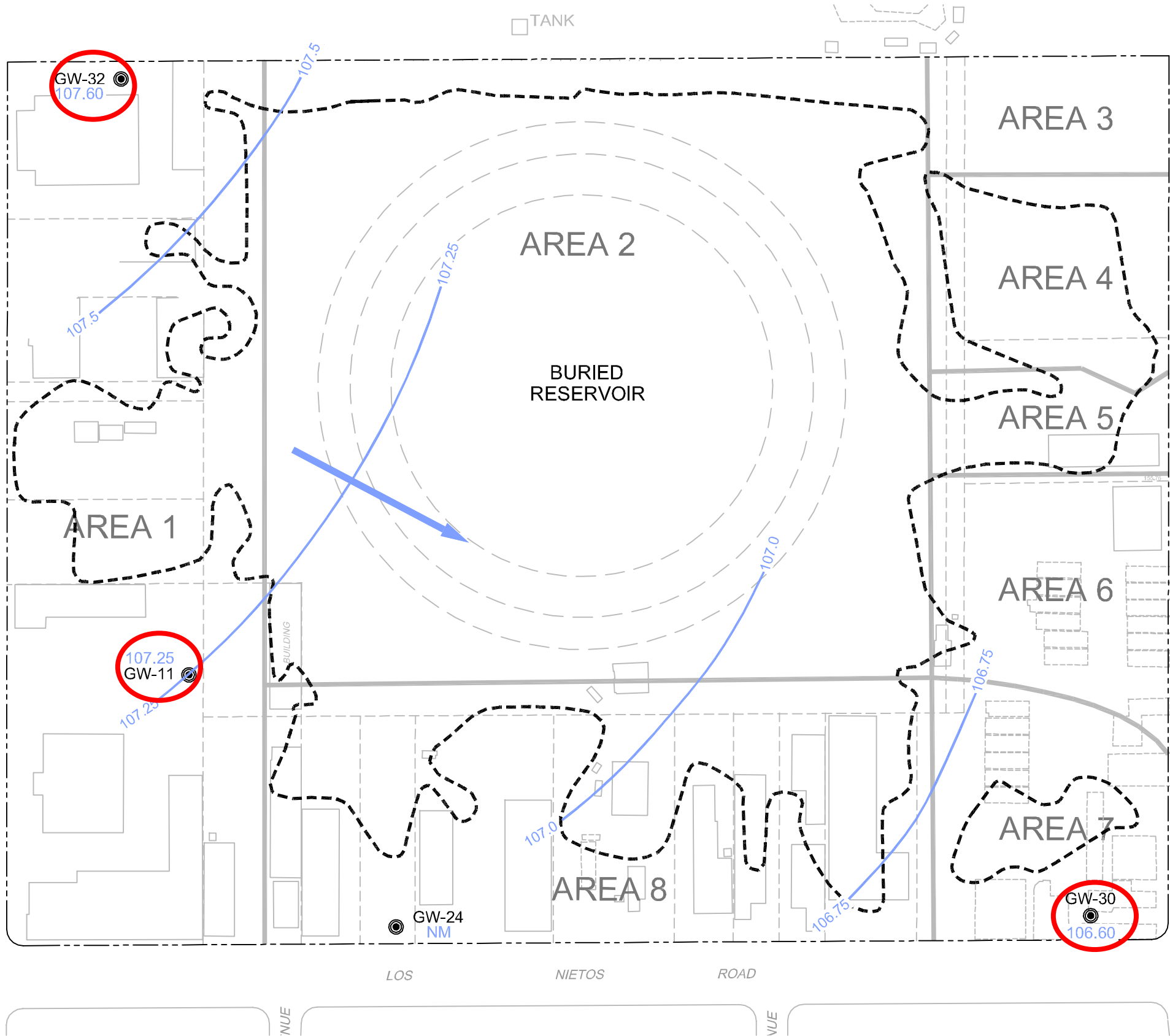
ATTACHMENT A
Figure 1-2.
Monitoring Well Locations.

ATTACHMENT B
Figure 5-6 and 5-7.
From: Project Navigator, Ltd. TRC Terradex, Inc.
(TRC). 2009.

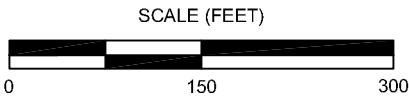
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LEGEND

- Deep Ground Water Monitoring Well
- 107.60 Ground Water Elevation (FT)
- Ground Water Contour Line
- Approximate Direction of Ground Water Flow
- Site Boundary
- Area Boundary
- AREA 1 Historical Use Designations
- Parcel Boundary
- Limit of Waste
- Existing Building
- Foundation Pads
- NM Not Measured
- FY Fiscal Year



REFERENCE:
Nunez Engineering, Survey Drawing NE 97187, Oct. 31, 1997.



PROJECT: 156626
FACILITY:
WASTE DISPOSAL, INC.
SANTA FE SPRINGS, CALIFORNIA

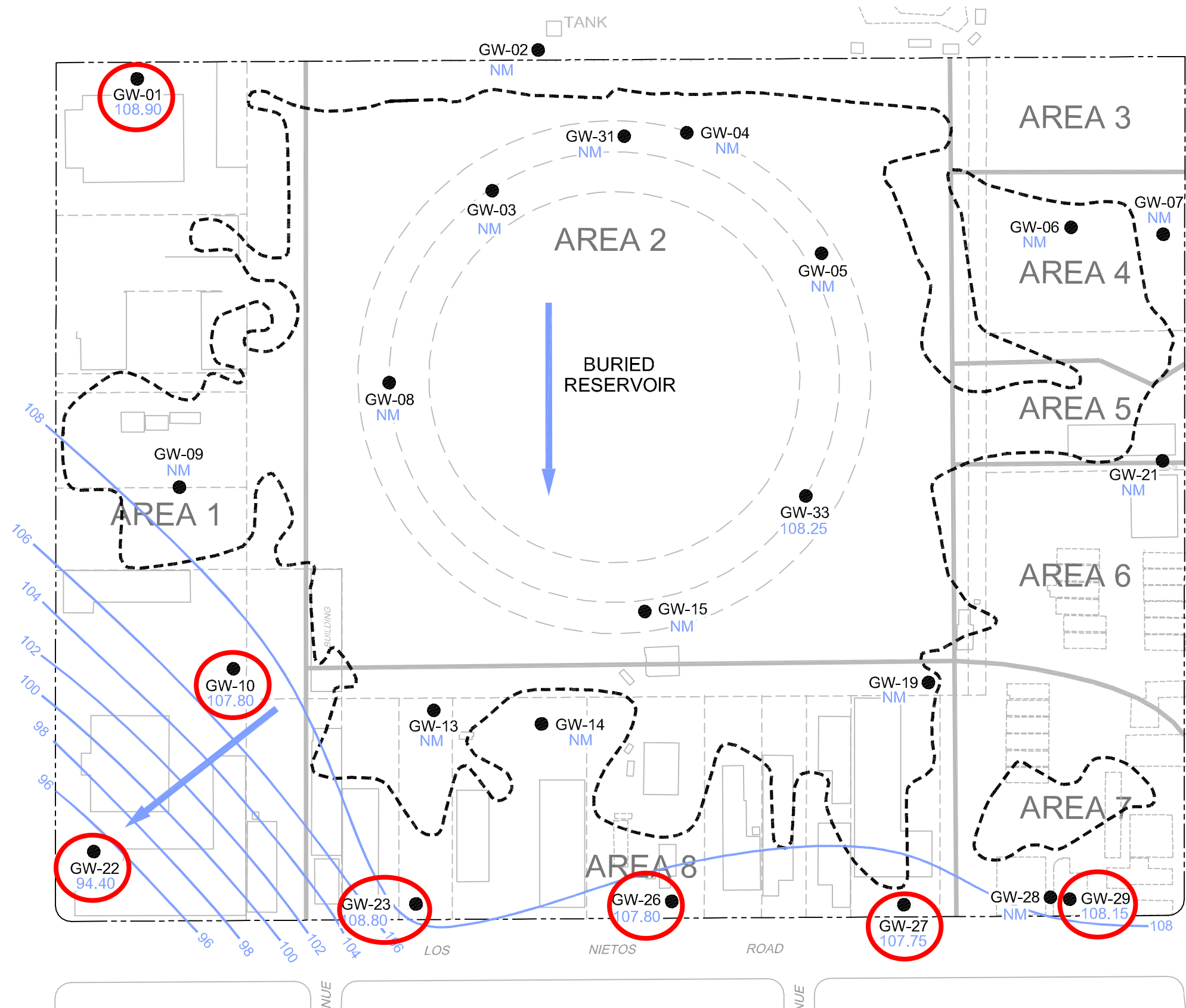
DEEP GROUND WATER
ELEVATION CONTOUR MAP
FIRST QUARTER OF FY 2007-2008 MONITORING

FIGURE 5-6

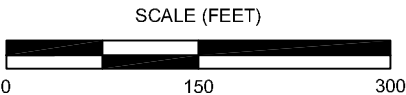
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LEGEND

- Shallow Ground Water Monitoring Well
- 108.90 Ground Water Elevation (FT)
- Ground Water Contour Line
- ➔ Approximate Direction of Ground Water Flow
- - - Site Boundary
- Area Boundary
- AREA 1 Historical Use Designations
- - - Parcel Boundary
- - - Limit of Waste
- Existing Building
- Foundation Pads
- NM Not Measured
- FY Fiscal Year



REFERENCE:
Nunez Engineering, Survey Drawing NE 97187, Oct. 31, 1997.



PROJECT: 156626
FACILITY:
WASTE DISPOSAL, INC.
SANTA FE SPRINGS, CALIFORNIA

SHALLOW GROUND WATER
ELEVATION CONTOUR MAP
FIRST QUARTER OF FY 2007-2008 MONITORING

FIGURE 5-7

ATTACHMENT C

Region 9 Laboratory Services Request.

REGION 9 SAMPLE COORDINATION CENTER (RSCC)
SUPERFUND ANALYTICAL REQUEST FORM

Section 1

Project Name: OMEGA Chemical Superfund Site OU2 Remedial Investigation/Feasibility Study		
Site Name: WDI Split Sampling	SS ID: BC	OU: 2
[X] RI/FS/RA [] Enforcement [] PA/SI [] Emergency Response [] Fed. Facilities		
Proposed Sampling Dates: December 2011		
EPA Task Order Project Officer: Lynda Deschambault		Mail Code: SFD-7-1

Section 2

Sampling Organization (if other than above): CH2M HILL	
Mailing Address: 1770 Iowa Avenue, Ste. 200 Riverside, CA 92507	
Project Manager: Tom Perina	E-mail: tperina@ch2m.com
Office Phone: 951.276.3003 ext. 34024	Office Fax: 714.424.2204
Sampler: Matthew Mayry (if different from above)	E-mail: Matthew.Mayry@CH2M.com
Office Phone: 714.435.6153	Mobile Phone: 714-914-1435

Section 3

<p>Title of QA plan or addendum to existing plan under which this sampling event will occur:</p> <p>1) Quality Assurance Project Plan Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study (CH2M HILL, 2004); Field Sampling Plan for Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study (CH2M HILL, 2004).</p> <p>2) Quality Assurance Project Plan Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study Addendum 1 (CH2M HILL, 2006); Field Sampling Plan for Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study Addendum 1 (CH2M HILL, 2006).</p> <p>3) Quality Assurance Project Plan Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study Addendum 2 (CH2M HILL, 2009); Field Sampling Plan for Omega Chemical Superfund Site Operable Unit 2 Remedial Investigation/Feasibility Study Addendum 2 (CH2M HILL, 2009).</p> <p>4) Technical Memorandum - Field Sampling Plan Addendum 9 Waste Disposal, Inc. Group Split Sampling Omega Chemical OU-2.</p> <p>EPA Quality Assurance Office DCN (if available):</p>

In compliance with EPA Order 5360.1, the EPA Region 9 Quality Management Plan, Section 1.1.2, states that, "An appropriate QA planning document ... will be developed and approved for each environmental data collection activity prior to the initiation of data collection."

Section 4

Type of Data Deliverable	Data Distribution (include e-mail address if appropriate)
Hard copy report	1. Tom Perina/CH2M HILL 1770 Iowa Avenue, Suite 200, Riverside, CA 92507 2. Lynda Deschambault/EPA (Deschambault.Lynda@epamail.epa.gov)
Electronic report copy	1. Tom Perina/CH2M HILL (tperina@ch2m.com) 2. Matthew Mayry /CH2M HILL (Matthew.Mayry@CH2M.com)
Electronic Data Deliverable (EDD) for R9 Lab Results*	1. Tom Perina/CH2M HILL (tperina@ch2m.com) 2. Matthew Mayry /CH2M HILL (Matthew.Mayry@CH2M.com)

Section 5

(Fill in table or attach copy of analytical description from Sampling and Analysis Plan)

Analysis (method, CLP SOW number, or R9 Lab SOP number)	Matrix (Sample Type)	No. of samples	TAT	Review/ Validation
Split Groundwater Sampling				
VOCs plus MTBE (CLP SOW SOM01.2) with TIC reporting needed	Groundwater	14	21 days	Tier 1A/1B 90% Tier 3 10%
1,4-Dioxane (CLP SOW SOM01.2)	Groundwater	14	21 days	Tier 1A/1B 90% Tier 3 10%

Notes:

- 1) Above sample numbers include field duplicates, lab qc, and trip blank samples.
- 2) See below (6) for expanded analyte list

Section 6

Include (or attach separately) any discussion of expanded or reduced analyte lists, required reporting limits, specialized preparation or analytical procedures, etc.

1) The analyses for the organics listed below will be per EPA Contract Laboratory Program (CLP) methodology. Per project needs, detection limits and the analyte list differ from the standard CLP lists, the analyses can be carried out per special services provisions currently available under the CLP. If needed low/trace level statements of work (to include use of ICP/MS or SIM) or larger sample volumes may be used to attain lower level detection limits. If CLP is unavailable, the analyses can be carried out at the EPA Regional laboratory using the laboratory's standard operating procedures and quality assurance equivalent to CLP. Required detection limits are listed below.

2) For groundwater, some analytes may be analyzed by the EPA CLP Statement of Work or the equivalent EPA Regional Laboratory Standard Operating Procedures shown in Appendix B of the July 2004 QAPP, depending on availability. EPA Regional Laboratory specifications or data quality indicator specifications have been provided in Appendix B of the July 2004 QAPP.

3) For VOCs, report also tentatively identified compounds (TICs).

REQUIRED REPORTING LIMITS, OMEGA CHEMICAL OU-2

Analytical Parameters and Reporting Limits for Split Groundwater Samples

Note: Analytes not on CLP-SOW TAL are indicated as “Additional-Modification”; SIM option required where applicable except for 1,4-dioxane which is requested to be analyzed by EPA Method 8270C; for analytes outside CLP program, the requested analytical method is provided.

Compound	CLP SOW Target Compound SOM01.1	Reporting Limit (ug/L)
<i>Organic Compounds</i>		
Acetone	Yes	5
Benzene	Yes	0.5
Bromochloromethane	Yes	0.5
Bromodichloromethane	Yes	0.5
Bromoform	Yes	0.5
Bromomethane	Yes	0.5
Carbon disulfide	Yes	0.5
Carbon tetrachloride	Yes	0.5
Chlorobenzene	Yes	0.5
Chloroethane	Yes	0.5
Chloroform	Yes	0.5
Chloromethane	Yes	0.5
Cyclohexane	Yes	0.5
Dibromochloromethane	Yes	0.5
1,2-Dibromo-3-chloropropane (DBCP)	Yes-SIM option	0.05
1,2-Dibromoethane	Yes-SIM option	0.05
1,2-Dichlorobenzene	Yes	0.5
1,3-Dichlorobenzene	Yes	0.5
1,4-Dichlorobenzene	Yes	0.5
Dichlorodifluoromethane	Yes	0.5
1,1-Dichloroethane	Yes	0.5
1,2-Dichloroethane	Yes	0.5
1,1-Dichloroethylene	Yes	0.5
cis-1,2-Dichloroethylene	Yes	0.5
trans-1,2-Dichloroethylene	Yes	0.5
Dichloromethane (Methylene Chloride)	Yes	0.5
1,2-Dichloropropane	Yes	0.5

Analytical Parameters and Reporting Limits for Split Groundwater Samples

Note: Analytes not on CLP-SOW TAL are indicated as “Additional-Modification”; SIM option required where applicable except for 1,4-dioxane which is requested to be analyzed by EPA Method 8270C; for analytes outside CLP program, the requested analytical method is provided.

Compound	CLP SOW Target Compound SOM01.1	Reporting Limit (ug/L)
cis-1,3-Dichloropropene	Yes	0.5
trans-1,3-Dichloropropene	Yes	0.5
Ethylbenzene	Yes	0.5
2-Hexanone	Yes	5
Isopropylbenzene (Cumene)	Yes	0.5
Methyl acetate	Yes	0.5
Methyl ethyl ketone	Yes	5
Methyl isobutyl ketone (MIBK)	Yes	5
Methylcyclohexane	Yes	0.5
Styrene	Yes	0.5
1,1,2,2-Tetrachloroethane	Yes	0.5
Tetrachloroethylene (PCE)	Yes	0.5
Toluene	Yes	0.5
1,2,3-Trichlorobenzene	Yes	0.5
1,2,4-Trichlorobenzene	Yes	0.5
1,1,1-Trichloroethane (1,1,1-TCA)	Yes	0.5
1,1,2-Trichloroethane	Yes	0.5
Trichloroethylene (TCE)	Yes	0.5
Trichlorofluoromethane	Yes	0.5
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	Yes	0.5
Vinyl chloride	Yes	0.5
Xylene(s)	Yes	0.5
Methyl tert-butyl ether (MTBE)	Yes	0.5

Emergent Compounds	Method	Reporting Limit (ug/L)
1,4-Dioxane	CLP SOW SOM01.2	0.5